**EA Sensory Service** The logo has a tulip shape image in blue, green and yellow, with the letters EA and word Education Authority t
o right of the image. 

# Accessibility platforms to support pupils with hearing loss inclusively via remote learning or in class.

## Introduction:

This document aims to provide information on some accessibility features on commonly used learning platforms and useful apps to support pupils with a hearing loss in remote learning and on their return to the classroom. Some of these features may be also benefit other learners, for example pupils working in noisy home environments or from EAL backgrounds.

There are challenges and opportunities for pupils with a hearing loss in the use of the latest technology to enhance pupil learning. The service has provided information to schools on supporting students with online learning. Further useful information on Deaf friendly remote learning is also available from the [National Deaf Children’s Society](file:///C:\Users\hutchinsond\Downloads\b0050-leak03-accessibility-guidelines-for-dyp-v4-2%20(2).pdf) (NDCS).

### Accessibility features embedded in learning platforms/software.

* **Background noise filters**- removes unwanted background noise such as paper shuffling or

dogs barking in live teaching sessions (e.g. Google Meet, MS Teams).

* **Auto-captioning** – advances in automatic speech recognition (ASR) technology

has provided the option of producing captions in real-time. ASR can typically generate captions that are about 80-90 percent accurate. However, many conditions must be present to reach that accuracy: little or no background noise, clear speech, and excellent audio quality.  A good quality microphone will aid accuracy. If any of the critical audio conditions are not met, [auto-caption accuracy can drop as low as 50 percent](https://www.3playmedia.com/2018/12/05/the-current-state-of-automatic-speech-recognition-why-we-still-need-humans-for-captioning/).

* **Live video calls**- pupils can turn on captions in the Teams app (this not is not available in the web browser) and in Goggle Meet. Please note a recording of a video call, e.g. to be viewed asynchronously, captions are not recorded. If you use screen recording apps (e.g. Screencastify) to record a captioned video call, captions will be retained.
* **Presentations tools** – e.g., Google slides, PowerPoint 365. Only the presenter's voice is captioned, for example if used in Google Meet/Teams.  You cannot save a transcript of the captions but if you make a screen-recording of your presentation, the captions will remain visible. A presentation in Microsoft Sway you can make an onscreen recording and auto generate captions.
* **Chromebooks:** pupils using Chromebook can enable accessibility features to customise captions (font size, typeface, and colour) and enable Mono audio. Mono audio sends the same sound to both the left and right speaker or ear-bud. This can make it easier to follow audio content if your hearing is better in one ear than the other

(Refer to Appendix 1: Examples of Learning Platforms and features to improve accessibility for deaf pupils- for “how to links”)

### Captioning video content

On popular online video-sharing platforms, e.g., YouTube, auto captions may be available. For teacher produced video content, there are many apps to add captions to make video content accessible. The choice of captioning app will depend on length of video, teacher preference, Android or iOS device, and ease of use. As with all auto-captioning, the apps rely on high quality audio and their accuracy is variable.

Refer to Appendix 2:  Examples of captioning apps for video content.

### Speech to text apps

Many students with hearing loss rely on speechreading/lip-reading to support comprehension of spoken language, but usage of masks restricts visual access to a speaker’s mouth and limits the volume and clarity of spoken language that reaches the student. The service has provided information to schools on supporting students with these challenges. One tool to aid communication is speech to text apps.

Speech to text or live transcription apps write out a person’s speech in real time, providing visual support to aid understanding of speech. Many of these apps may be operated on tablets, computers, and mobile phones, making these services readily accessible to students in the classrooms, online learning, small groups, and social situations. As discussed earlier, the accuracy of automatic captions depends on several factors.

The apps are suitable to be used with pupils aged 13+. As the apps make a recording of conversations, consent is needed from contributors, and schools should consider their use in the context of their ICT acceptable use policy.

Refer to Appendix 3:  Examples of captioning apps for video content.

Other options of captioning tools or dictation:Refer to Appendix 4.

## Summary:

Technology your school is already using may have useful accessibility features for pupils with a hearing loss (noise reduction/ captioning), both for remote learning and in the classroom.

* There is a wide range of auto-captioning apps available for video content.
* Speech to text apps may aid communication in the classroom in these challengingtimes for pupils with a hearing loss due to the use of face masks and social distancing.
* All automatic speech recognition technology has their limitations.
* It is important to ask the young person you work with what they need. This is will help them self-advocate as young adults.

The use of auto-captioning in mainstream classrooms is in its infancy here and in UK schools. We are all on a learning journey, so it may be a case of “trial and error” and working with the young person, ICT support and the service to find out what works best in your classroom. It would be useful to feed back to the service, challenges, and successes so we can learn from them and inform future practice.